GLADKOVSKIY, A K

3(5)   15(6)   p 2   PHASE I BOOK EXPLOITATION   SOV/1254

Akademiya nauk SSSR. Otdeleniye geologo-geograficheskikh nauk

Boksity, ikh mineralogiya i genezis (Mineralogy and Origin of Bauxites)
Moscow, Izd-vo AN SSSR, 1958. 488 p. 2,200 copies printed.

Compiler: Dolgopolov, N.N.; Chief Ed.: Strakhov, N.M., Academician;
    Resp. Ed.: Bushinskiy, G.I.; Ed. of Publishing House: Nosov, G.I.;
    Tech. Ed.: Polenova, T.P.

PURPOSE: The book is intended for scientists working in geology and associated
    fields, and managers of industrial and engineering concerns.

COVERAGE: This collection of articles by various authors on the mineralogy and
    geochemistry of bauxites appeared as a result of a 1955 conference on the
    origin of bauxite (Chairman, Academician N.M. Stakhov). The conference dis-
    cussed the genetic theories propounded by various scientists, underlining the
    weakness of L.S. Berg's biochemical theory and the hydrothermal theories
    developed by some French scientists. The majority of Soviet geologists
    appear to be in accord with the sedimentary origin theory. The book discusses
    problems on the origin of bauxite and describes some deposits found in the
    USSR. Each article is accompanied by Soviet and other references, photographs,
    diagrams, tables and maps.

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The Geochemistry of Aluminum, Titanium, Iron, and Silica Under the
Effect Sulfate Weathering (In Connection with Bauxite Origin)
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AVAILABLE: Library of Congress

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GLADKOVSKIY, A.K.; DEGTYAREV, D.D.; SHURYGINA, M.V.

Origin of Devonian bauxites in the Urals. Nauch. dokl. vys. shkoly;
geol.-geog. nauki no.3:134-138 '58.   (MIRA 12:1)

1.Sverdlovskiy gornyy institut.
     (Ural Mountains--Geology, Stratigraphic)
     (Bauxites)   (Petrology)

Y, A.K.

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                                    (i.la 12:10)

ains--Bauxite   . . .   .

GLADKOVSKIY, A.K.

Distribution of lower Cretaceous bauxite deposits on the eastern slope
of the Urals and methods of prospecting for them. Trudy Gor.-geol.
inst. UFAN SSSR no.40:165-173 '59.   (MIRA 13:11)
            (Ural Mountains--Bauxite)

GLADKOVSKIY, A.K.; SHAROVA, A.K.

Minerals fromed during the weathering of bauxites in the Southern Ural Basin and their role in the geochemistry of bauxites. Izv. vys. ucheb. zav.; geol. i razv. 3 no.7:130-134 Jl '60.

(MIRA 13:9)

1. Sverdlovskiy gornyy institut.
(Southern Ural Basin--Bauxites)

GLADKOVSKIY, A.K.; GUTKIN, Ye.S.

Formation of the Ural Devonian bauxites. Geol. rud. mestorozh.
no.5:107-112 S-O '60.   (MIRA 13:10)

1. Gorno-geologicheskiy institut Ural'skogo filiala AN SSSR,
Sverdlovsk.
          (Ural Mountains--Bauxite)

GLADKOVSKIY, A.K.; USHATINSKIY, I.N.

      Composition, origin, and alteration of bauxites in Tikhvin
      District. Trudy Gor.-geol.inst. UFAN SSSR no.56:109-135
      '61.   (MIRA 15:7)
               (Tikhvin District--Bauxite)

GLADKOVSKIY, A.K.; SHAROVA, A.K.

Regularities in the composition and formation of bauxite deposits
in the Urals and the Turgay Plain. Trudy Gor.-geol.inst. UFAN SSSR
no.58:169-205 '62.   (MIRA 15:12)
     (Ural Mountains—Bauxite) (Turgay Tableland—Bauxite)

GLADKOVSKIY, A.K.

Methodology of compiling maps of the prospects and metallogeny of
Cretaceous bauxites in the trans-Ural region and the Turgay Plain.
Trudy Gor.-geol.inst. UFAN SSSR no.58:207-219 '62.   (MIRA 15:12)
          (Ural Mountain region—Bauxite—Maps)
          (Turgay Tableland—Bauxite—Maps)

GLADKOVSKIY, A.K.; SHAROVA, A.K.

"Triassic" bauxites on the eastern slope of the Urals. Dokl.
AN SSSR 151 no.6:1420-1423 Ag '63.   (MIRA 16:10)

1. Institut geologii Ural'skogo filiala AN SSSR. Predstavleno
akademikom D.I.Shcherbakovym.

GLADKOVSKIY, A. K.; SHAROVA, A. K.

Bauxite potential of the Lower Mesozoic sediments of the eastern
slope of the Northern Ural Mountains. Izv AN SSSR Ser geo~ 29 no. 5:
67-75 My '64.   (MIRA 17:5)

1. Institut geologii Ural'skogo filiala AN SSSR, Sverdlovsk.

GLADKOVSKIY, A.K.; RUDNOVA, M. Ia.

Weathering of Devonian bauxites in the Southern Urals. Lit. i pol.
iskop. no.3:131-139 My-Je '64.   (MIRA 17:11)

1. Institut geologii Ural'skogo filiala AN SSSR.

GLADKOVSKIY, A.K.; USHATINSKIY, I.N.

Mineral composition of the main bauxite deposits of the world; origin
and alteration of alumina minerals and bauxites. Trudy Inst.geol. UFAN
SSSR no.64:5-40 '64.   (MIRA 17:12)

Remarks on the book "Bauxites, their mineralogy and genesis." Ibid.:243-
252

GLADKOVSKIY, A.K.; RUDNOVA, M.Ya.

Structure and composition of the weathering zone of bauxite deposits
in the Southern Ural Basin. Trudy Inst.geol. UFAN SSSR no.64:41-57
'64.
(MIRA 17:12)

GLADKOVSKIY, A.K.; SHAROVA, A.K.

Significance of the facies primary and secondary characteristics of
bauxites in forecasting. Trudy Inst.geol. UFAN SSSR no.64:167-176 '64.
(MIRA 17:12)

GIALKOVSKIY, A.K.; KHELTSOV, V.N.

Origin of the bauxites of the Kursk Magnetic Anomaly region.
Dokl. AN SSSR 156 no. 4:821-824 Je '64.   (MIRA 17:6)

1. Institut geologii Ural'skogo filiala AN SSSR. Predstavleno
akademikom A.L.Yanshinym.

GLADKOVSKIY, A.K.; SHAROVA, A.K.; KHRAMTSOV, V.N.

Characteristics of the composition, origin, and changes of Mesozoic and Cenozoic bauxite deposits in the Asiatic part of the U.S.S.R. Trudy Inst.geol. UFAN SSSR no.64:127-166 '64.

(MIRA 17:12)

GLADKOVSKIY, A.P.

Clinical characteristics of ornithosis. Trudy Len. inst.
epid. i mikrobiol. 25:192-200 '63.   (MIRA 17:1)

1. Iz Leningradskoy infektsionnoy bol'nitsy imeni Botkina.

TOKAREVICH, K.N.; VISHNYAKOVA, L.A.; GLADKOVSKIY, A.P.; YAKOVLEV, N.N.

Outbreak of ornithosis of an occupational nature. Trudy Len.
inst. epid. i mikrobiol. 25:185-191 '63.   (MIRA 17:1)

1. Iz otdela osobo opasnykh infektsiy Leningradskogo insti-
tuta epidemiologii i mikrobiologii imeni Pastera i Lenin-
gradskoy infektsionnoy bol'nitsy imeni S.P. Botkina.

VISHNYAKOVA, L.A.; GLADKOVSKIY, A.P.

Duration of the preservation of complement-fixing anti-
bodies following the recovery from ornithosis. Trudy Len.
inst. epid. i mikrobiol. 25:219-224 '63.

(MIRA 17:1)

1. Iz otdela osobo opasnykh infektsiy Leningradskogo insti-
tuta epidemiologii i mikrobiologii imeni Pastera i Lenin-
gradskoy infektsionnoy bol'nitsy imeni Botkina.

SOV/6082

International symposium on macromolecular chemistry, Moscow, 1960.
Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moscow, 1960.
Trudy 1960 g.; doklady i avtoreferaty. Sektsiya I. (International Sympos-
ium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and
Summaries. Section I.) [Moscow, Izd-vo AN SSSR, 1960] 360 p. 3,500 copies
printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry.
Commission on Macromolecular Chemistry.

Resp. Ed.: V. V. Korshak.

PURPOSE: This collection of articles is intended for chemists and researchers
interested in macromolecular chemistry.

COVERAGE: This is Section I of a multivolume work containing scientific papers
on macromolecular chemistry in Moscow. The material includes data on the
synthesis and properties of polymers, and on the processes of polymerization,
copolymerization, polycondensation, and polymerization. Each part is
presented in full or summarized in French, English, and Russian. There are
47 papers, 25 of which were presented by Soviet, Rumanian, Hungarian, and
Czechoslovakian scientists. No personalities are mentioned. References
accompany individual articles.

Tigerova, Ye. I., B. A. Dolgoplosk, E. G. Orazbekova, D. P. Frankevvch,
and E. H. Kuznetsova (USSR). The Synthesis of cis- and trans-Diene Polymers
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Schlinoky, N. S., K. Kessina, A. Storomenkova and M. Svorek (Czechoslovakia).
The Structure of Hardened Constrained Polyesters   58

Silberman, Ye. N., A. Ye. Kulikova, and N. M. Petrova (USSR). New
Method of Preparation of Polyesters and their Polymers   64

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Sektuski, Yu. Ye. I. V. Ostromyslensky, M. G. Zaitseva, I. Ye. Berenbeym,
and A. I. Kirsanov (USSR). On the Synthesis of Polymerization of Cross-
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Polymerization of Vinylcarbazol in the Presence of Butyllithium and
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Szarian, I. S., A. V. Topchiev, and S. G. Duroz'yan (USSR). Polymerization
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E. I. Kuznetsov, V. V. Lymm, A. I. Borisov, and V. V. Borissog (USSR).
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Kotor, M. F., D. A. Kochkin, and P. S. Morinsky (USSR). The Effect
of Chemical Structure on the Polymerization Activity of the Constructed
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Volkenshtern, M. V. (USSR). Cooperative Processes in the Polycondensa-
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VANSHEYDT, A.A.; MEL'NIKOVA, Ye.P.; GLADKOVSKIY, G.A.

Preparation and properties of polyphenylene-type
polymers. Part 2: Preparation of polyarylenemethyls
by polycondensation of aromatic hydrocarbons with their
bis-acetoxy and bis-chloromethyl derivatives. Vysokom.soed.
4 no.9:1303-1309 S '62.   (MIRA 15:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
        (Hydrocarbons)   (Polymers)

BLADROVSKII, I.A.; SKOROKHODOV, S.S.; SLYVINA, S.G.; KROTKII, V. ...

Synthesis and properties of vinyltropylium perchlorate. Izv. A
SSSR. Ser.khim. no.7:1273-1277 Jl '63.   (MIRA 1:8)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
            (Tropylium compounds)

87462

S/057/60/030/012/009/01:
B019/B056

24. 2120

AUTHORS: Afrosimov, V. V., Gladkovskiy, I. P., Gordeyev, Yu. S.,
               Kalinkevich, I. F., and Fedorenko, N. V.

TITLE: Investigation of Atomic Flux Emitted by Plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30. No. 12,
               pp. 1456 - 1468

TEXT: The authors developed a method of measuring the flux of uncharged
atoms having an energy of 300 ev to some thousand kev. The method is
based upon the recording of individual atoms after their ionization and
acceleration to 10-20 kev. Fig.1 shows a scheme of this instrument, in
which the ionized particles are directed onto an Al-Mg target, where they
produced secondary ions which were measured by a scintillation counter.
For the calibration of the installation, a special device for mono-
chromatic ions and atoms was used. The calibration curves are shown and
discussed in detail. Further, installations are described in detail,
which permit the time dependence of the atom flux, the energy distribu-
tion, and the mass analysis of the atoms to be determined by an

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87462

Investigation of Atomic Flux Emitted by   S/057/60/010/012/009/011
Plasma   B019/B056

oscilloscope. The energy distribution of the atoms was studied with the
relation $dJ/dE = J_+(E)/\bar{\alpha}_o(E)\mu E$, where $J_+(E)$ is the current of secondary
ions, and $\bar{\alpha}_o(E)$ the mean recording efficiency. The density of the atomic
flux was determined from the relation

$$dJ/d\Omega = (1/\bar{\Omega}S_{eff}) \int_{E_1}^{E_2} J_+(E)dE/\bar{\alpha}_o(E)\mu E,$$ where $\bar{\Omega}$ is the mean solid angle,

and S_{eff} the effective plasma surface. For calculating the concentra
tion of atoms per unit volume the formula

$$n_o = 2\sqrt{2M} \int_{E_1}^{E_2} (dJ/dE)dE/\sqrt{E}$$ was used. By changing $\bar{\Omega}$, the light intensity μ,

and the thickness of the gas target, it is possible to improve the
sensitivity considerably. The least measured density of the flux of
hydrogen atoms having an energy of 300 ev in the case of an isotropic

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Investigation of Atomic Flux Emitted by   S/057/60/030/012/009/011
Plasma   B019/B056

velocity distribution was $1 \cdot 10^{10}$ at/cm^2.sec. There are 10 figures and
5 references: 4 Soviet and 1 US.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad
               (Institute of Physics and Technology AS USSR, Leningrad)

SUBMITTED: July 15, 1960

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37462

S/057/60/030/012/009/011
B019/B056

Legend to Fig.1:
plasma space. K_1 en-
trance slit of the in-
strument. K_1 capacitor
for the deflection of
charged particles. C ioni-
zation chamber. K_2 and K_3
entrance and exit slits
of the ionization chamber.
Γ and B tubes for the
lead-in of a gas and pres-
sure measurement. K_2 ana-
lyzer. $\mathcal{H}_4$ detector-en-
trance slit. Π detector.
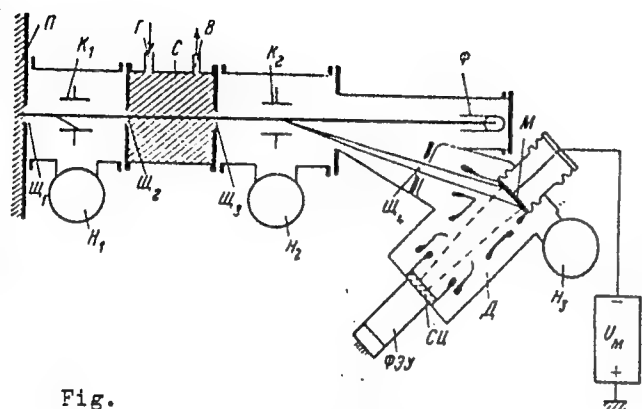
Fig.

РИС 1. Схема прибора для исследования потока атомов.

M target. U_M source of acceleration voltage. СЦ scintillator.
ФЭУ photomultiplier. H_1, H_2, and H_3 diffusion pumps. Φ Faraday auxiliary
receiver.
Card 4/4

S/057/60/030/012/010/011
B019/B056

26.2311

AUTHORS: Afrosimov, V. V., Gladkovskiy, I. F., Gordeyev, Yu. S.,
             Kalinkevich, I. F., Petrov, M. P., and Fedorenko, N. V.

TITLE: Investigation of a Flux of Neutral Atomic Particles
             Emitted by the Plasma of "Al'fa" Research Installation

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 12,
             pp. 1469 - 1484

TEXT: The authors used the device described in the present issue on
p. 1456 ff to investigate the atomic flux with energies of 300 ev to
10 kev, emitted by the plasma of "Al'fa". The measurements showed that
practically all atoms recorded are hydrogen atoms. The quantity of the
fast atoms grows with an increase of the capacitor voltage, with a de-
crease of the external magnetic field H_z, or with a decrease of the

hydrogen pressure in the chamber. In the course of discharge, the quan-
tity of fast atoms reaches a maximum, while the discharge current in-
creases to its first maximum. However, there is no considerable

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87401

Investigation of a Flux of Neutral Atomic Particles S/057/60/030/0·2/010/0·1
Emitted by the Plasma of "Al'fa" Research   B019/B056
Installation

difference in the energy distribution of atoms during discharge. A table
gives data on the atomic flux. Analysis of the data showed that the
fraction of atoms in the atomic flux generated by reflection of ions
from the wall, is small compared to the fraction coming direct from the
plasma. It was further shown that the energy distribution of atoms and
ions in the plasma space are very similar, and that the energy distribu
tion cannot be approximated by Maxwell distribution The mean energy of
hydrogen atoms reflected from a metal surface is estimated in an appen-
dix. The authors thank B. P. Konstantinov for his valuable advice and
discussion, D. M. Kaminker for his interest, O. V Konstantinov and
V. I. Perel' for taking part in discussions, as well as Ye. G Komar,
A. M. Stolov, and V. A. Glukhikh for their assistance in measurements.
There are 11 figures, 1 table, and 8 references: 6 Soviet and 2 US.

Card 2/4

Investigation of a Flux of Neutral Atomic   S/057/60/030/012/010/011
Particles Emitted by the Plasma of "Al'fa"   B019/B056
Research Installation

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Institute of
              Physics and Technology of the AS USSR). Nauchno-
              issledovatel'skiy institut elektrofizicheskoy apparatury
              (Scientific Research Institute of Electrophysical
              Apparatus)

SUBMITTED: July 15, 1960

Card 3/4

S/057/60/030/012/010/011
B019/B056

Режим	Плотность потока				$E_{ср.}$	ε,
	q атомов на еди- ницу телесного угла $\frac{dI}{d\Omega}$	$\frac{1}{см^2 \cdot стр \cdot разр.}$	b при изотропном распределении скоростей атомов I, $\frac{1}{см^2 \cdot разр.}$	c энергия, уносим- ной атомами $\frac{\varepsilon}{S}$, $дж/см^2 \cdot разр.$	$E_{ср.}$ эв	ε, эдж/разр.
5 кв, 360 эрст.	$1.9 \cdot 10^{-13}$		$1.2 \cdot 10^{14}$	$1.0 \cdot 10^{-2}$	480	3.0
10 кв, 360 эрст.	$8.6 \cdot 10^{-13}$		$5.4 \cdot 10^{14}$	$4.5 \cdot 10^{-2}$	530	13.5
10 кв, 720 эрст.	$5.3 \cdot 10^{-13}$		$3.3 \cdot 10^{14}$	$2.5 \cdot 10^{-2}$	480	7.5
15 кв, 180 эрст.	$5.0 \cdot 10^{-13}$		$3.1 \cdot 10^{14}$	$3.1 \cdot 10^{-2}$	670	9.4
15 кв, 360 эрст.	$3.5 \cdot 10^{-13}$		$2.2 \cdot 10^{14}$	$2.3 \cdot 10^{-2}$	630	7.0
15 кв, 720 эрст.	$4.4 \cdot 10^{-13}$		$2.8 \cdot 10^{14}$	$2.4 \cdot 10^{-2}$	530	7.2

Legend to Table 1: 1) Experimental conditions, voltage at the discharge
capacitors in kv, magnetic field in oe. 2a) Atoms per unit of solid
angle. 2b) Density of atomic flux in isotropic velocity distribution.
2c) Energy of atoms in joules/cm^2.

Card 4/4

ACCESSION NR: AT4025308   8/0000/63/000/000/0182/0192

AUTHORS: Afrosimov, V. V.; Gladkovskiy, I. P.; Petrov, M. P.

TITLE: Plasma diagnostics by means of fast neutral particles in apparatus using a discharge in a strong magnetic field

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 182-192

TOPIC TAGS: plasma turbulence, plasma research, magnetic mirror, ion mass analysis, nuclear stripping reaction, mass analysis, ionization, ionized plasma

ABSTRACT: In view of the large amount of information that can be obtained from a study of the flux of fast neutral atoms emitted by a plasma in toroidal-discharge installations in a strong magnetic field, an atomic analyzer was employed for the analysis of the flux of fast atoms emitted by the plasma in the "Tokamak-2 (T-2)" appara-

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tus. The analyzer was described in detail earlier (Zh. tekhn. fiz.
v. 30, No. 12, 1456, 1960). A fraction of the fast atoms entering
the instrument was converted into ions by stripping on nitrogen
molecules. These ions were analyzed by energy in an electric field
and then by mass in a magnetic field, after which they proceeded to
the detector. The instrument was calibrated with auxiliary appara-
tus described in detail in the same reference as the main apparatus.
The various precautions needed to ensure precision are discussed.
It was established that the plasma from the T-2 apparatus emits an
atom flux with energy of hundreds and thousands of electron volts.
A mass analysis of the secondary ions produced by stripping the ni-
trogen atoms has shown that about 99% of the ions are protons. The
only noticeable impurity was carbon-12. The main mechanism produc-
ing this flux of fast atoms is neutralization of the plasma ions via
charge exchange with the atoms entering the plasma. The conditions
for the occurrence of this flux are estimated. Preliminary measure-
ments of the spatial distribution of the atom flux over the volume

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ACCESSION NR: AT4025308

of the chamber was also carried out and it was established that the
fast-atom flux comes from all parts of the chamber. The energy dis-
tribution of the fast atoms indicates that the plasma ions have no
Maxwellian energy distribution, a feature characteristic of turbu-
lent plasma. Orig. art. has: 3 figures and 6 formulas.

ASSOCIATION: None

SUBMITTED: 19Oct63   DATE ACQ: 16Apr64   ENCL: 02

SUB CODE: ME   NR REF SOV: 003   OTHER: 002

Card   3/5

ACCESSION NR:AT4025308   ENCLOSURE: 01
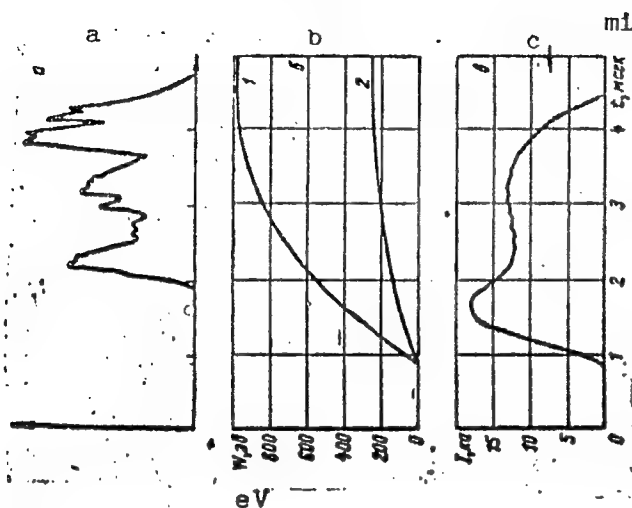
millisec.

Comparison of time de-
pendence of the hydrogen
atom flux, discharge
current, and energy
supplied.
a - hydrogen atom flux
(E = 300 eV), b - energy
delivered to plasma
(1 - per particle within
the plasma pinch, 2 -
per particle within the
chamber volume), c -
discharge current

Card 4/5

ACCESSION NR: AT4025308   ENCLOSURE: 02
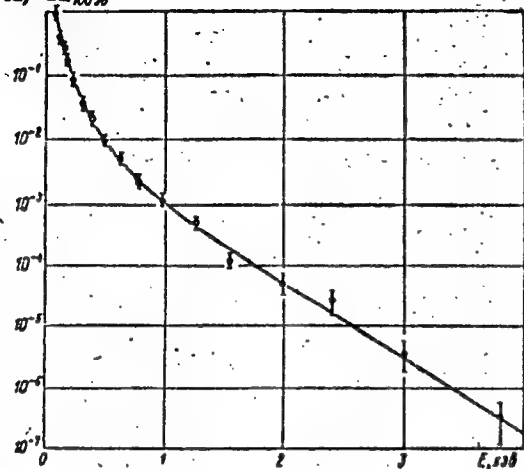
Energy distribution of the
hydrogen atoms in the stream

Card 5/5

S/057/63/033/002/011/023
B108/B:86

AUTHORS: Afrosimov, V. V., Gladkovskiy, I. P., Kislyakov, A. I., and
              Petrov, M. P.

TITLE: A mass analysis of the current of neutral atomic particles
              ejected from the plasma in the "Alpha" machine

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 2, 1963, 205 - 211

TEXT: Fast neutral particles with energies of 500 - 5000 ev were mass-
analyzed by measuring the flight time of the particles as described in
ZhTF, 30, 12, 1456, 1960. A magnetic mass analyzer was used to avoid
difficulties in handling high-energy particles. The hydrogen plasma in
the Alpha machine was found to be a source of a large number of impurity
atoms. Since the impurity concentration varies with time and depends on
the working conditions of the machine in the same way as the hydrogen con-
centration it can be assumed that the impurity and hydrogen atoms form in
similar processes (recharging, desorption of gases from chamber wall,
evaporation of wall material, etc.). The current of the impurity atoms in-
creases at the end of the discharge. This may lead to an increase in
impurity ion concentration of the plasma, and also to an increase of the
Card 1/2

A mass analysis of the current...   S/057/63/033/002/011/023
                                           B108/B186

current of particles on which the impurity ions are recharged. There are
4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Lenin-
             grad (Physicotechnical Institute imeni A. F. Ioffe AS USSR,
             Leningrad)

SUBMITTED: February 2, 1962

Card 2/2

GLADKOVSKIY, P.S.

The PVK-200-type steam turbine with a 200,000 Kw capacity. Biul.
tekh.-ekon.inform. no.7:36-39 '58.   (MIRA 11:9)
                    (Steam turbines)

GLADKOVSKIY, P.S., inzh.

The K-300-240 steam turbine manufactured by the Leningrad Metalworks.
Energomashinostroenie 8 no.3:1-3 Mr '62.   (MIRA 15:2)
(Leningrad—Steam turbines)

GEMMERLING, G.; GLADKOVSKIY, T.

Slag-pumice concrete in panels of outer walls. Na stroi. Ros.
3 no.5:22-23 My '62.   (MIRA 15:9)

1. Rukvoditel' laboratorii stroitel'nykh materialov Ural'skogo
filiala Akademii syroitel'stva i arkhitektury SSSR (for
Gemmerling). 2. Nachal'nik tsentral'noy stroitel'noy laboratorii
tresta Chelyabmetallurgstroy (for Gladkovskiy)
            (Concrete walls)

GLADKOVSKIY, T. K.

USSR/Engineering - Construction,   15 Jul 52
        Materials, Testing

PA 228T82

"Instrument for Determination of Calcium Chloride
in Cob Brick," T. K. Gladkovskiy, V. Ya. Savel'yev,
Engineers Trust Tagilstroy

"Byul Stroit Tekh" No 14, pp 26, 27

Describes improved instrument designed in 1949 by
Engr P. E. Rickert for detn of CaCl2 in brick by
its elec cond. Addn of CaCl2 into brick material
was suggested as measure against freezing of cob
brick at temp below 0°C, making it possible to

228T82

prolong period of natural drying of bricks. This
prolongation is essential, especially under cli-
matic conditions of the Urals and Siberia, article
states.

228T82

GLADKOVSKIY, V.A.; GINDIN, A.Sh.; KOSSOVSKIY, L.D.; POPOV, N.P.

Evaluation of the magnitude of residual stresses in surface
layers of a back-up roll. Zav. lab. 29 no.9:1128-1129 '63.
                                            (MIRA 17:1)

1. Permskiy politekhnicheskiy institut.

CARUL', T I.; GLADKOVSKIY, V.A., nauk. tekhn. nauk, dots., st.
ret.; UD UKHTVA, E.A., ret.

[Fundamentals of the theory of elasticity] Osnovy teorii
uprugosti. Perm', Izd., state. Perm. 1963.
(KIRA 18:9)

1. Perm. Politekhnicheskiy Institut. Kafedra soprotivle-
niya materialov. 2. Zaveduyushiy kafedroy soprotivleniya
materialov Permskogo politekhnicheskogo instituta (for
Gladkovskiy).

USSR/Metallurgy - Yield of steels   FD-1013

Card 1/1   : Pub. 153 - 17/24

Author   : Gladkovskiy, V. A.

Title   : Area of yield of low-carbon steels

Periodical   : Zhur. tekh. fiz., 24, 1090-1092, Jun 1954

Abstract   : Remarks that in the evaluation of the static strength of objects made of
                 low-carbon steel the most important characteristic is the yield limit,
                 which is ordinarily briefly expressed as the area of yield. Studies the
                 influence of a third element in a binary alloy on yield. Considers the
                 cementite network around ferrite grains. Thanks N. N. Davidenkov. Five
                 references, 3 USSR (e.g. M. V. Yakutovich, 1946; V. I. Arkharov, 1948,
                 of Institute of the Physics of Metals).

Institution   : -

Submitted   : February 3, 1954

GLADKOVSKIY, V.A.

Effect of hydrostatic pressure on the characteristics of carbon steel deformation. Fiz.met. i metalloved. 1 no.3:563-564 '55.(MLRA 9:6)

1. Ural'skiy filial Akademii nauk SSSR, Institut fiziki metallov.
      (Steel--Testing)

USSR/Solid State Physics - Mechanical Properties of Crystals   E-10
            and Polycrystalline Compounds.

Abs Jour   : Referat Zhur - Fizika, No 5, 1957, 11923

Author   : Gladkovskiy, V.A.

Inst   : Institute of Physics of Metals, Ural'Branch, Academy of
               Sciences, USSR.

Title   : Influence of Hydrostatic Pressure on Hardness of Carbon
               Steel

Orig Pub   : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 183-184

Abstract   : The hardness of steel with 26% carbon was measured in spe-
               cimens 14 mm in diameter and 10 mm thick, after normaliza-
               tion in vacuum at 900° for one hour with a hydrostatic
               pressure up to 3,000 kg/cm^2. It was established that the
               hardness of the steel increases linearly with increasing
               pressure. At 3,000 kg/cm^2, the increase in hardness is
                                        approximately 5%.

Card 1/1

AUTHORS: Gladkovskiy, V. A. and Oleynik, M. I.   126-3-21/34

TITLE: Rig for investigating the mechanical properties of metals under high hydrostatic pressure. (Ustanovka ilya issledovaniya nekhanicheskikh svoystv metallov pod vysokim giarostaticheskim davleniyem).

PERIODICAL: "Fizika Metallov i Metallovedeniye" (Physics of Metals and Metallurgy), 1957, Vol.4, No.3, pp. 531-535 (U.S.S.R.)

ABSTRACT: The test rig developed by Bridgman, P.W. (1)has the disadvantage that it is not possible to maintain constant the hydrostatic pressure during the tests. The test rig used by Ratner, S.I. (2) for tensile tests of non-ferrous metals under conditions of external hydrostatic pressures of up to 4000 kg/cm² did permit maintaining the pressure constant for the entire duration of the tests. In the Metal Physics Institute of the Ural Branch of the Ac.Sc. U.S.S.R. a test rig was designed and built permitting testing of metals under pressures of up to 10 000 kg/cm² with automatic recording of the test results. The rig consists of a high pressure chamber, a small hydraulic press, a high pressure compressor and electrical apparatus. A sketch of the main assembly of the test rig is shown in Fig.1, p.532; the basic electrical circuit diagram is shown in Fig.2, p.533. The high pressure chamber consists of a thick wall steel cylinder with an external diameter of

Card 1/2

Rig for investigating the mechanical properties of metals
under high hydrostatic pressure. (Cont.)

125-3-21 '34

200 mm, an internal diameter of 20 mm and a length of
230 mm. Automatic recording of the stress-strain curves
is effected by means of electrical circuits incorporating
strain gauges, a multi-channel electronic amplifier, a loop
oscillograph and other instruments. A typical oscillogram
obtained during deformation of hardened Be bronze under
a pressure of 3000 kg/cm^2 is reproduced in Fig.3, p.534
indicating the tensile stress, the hydrostatic pressure and
the deformation. The graph, Fig.4, gives the dependence of
the tensile stress on deformation for hydrostatic pressures
of 3000 atm and 1 atm.   The hydrostatic pressure increases
appreciably the yield point but the increase in the tensile
stress with increasing deformation at a hydrostatic pressure
of 3000 kg/cm^2 is considerably lower than at atmospheric
pressure. Acknowledgment is made to Prof. L. F. Vereshchagin
for his valuable advice.

Card 2/2

There are 4 figures and 2 references, one of which is Slavic.

SUBMITTED: August 2, 1956.

ASSOCIATION: Institute of Metal Physics, Ural Branch of the Ac.Sc.
U.S.S.R. (Institut Fiziki Metallov Ural'skogo Filiala AN SSSR)

AVAILABLE: Library of Congress

AUTHORS: Vorob'yev, A.D., Glushkovskiy, V.A. and Rodionov, K. P.   126-5-3-27/31

TITLE: The effect of Pressure on Young's Modulus for Certain
            Metals (O vliyanii davleniya na modul' Yunga nekotorykh
            metallov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol 5, Nr 3,
            pp 577-580 (USSR)

ABSTRACT: An apparatus dependent on observations on bending (not
            described in detail) is used at hydrostatic pressures up
            to 5000 kg/cm². Electrolytic copper and aluminium,
            99.75-99.95% pure, and medium-carbon steel are used; the
            results are given in Table 1 (left column: Al, Cu, Steel;
            units cm²/kg; columns: from (2), from experiment), for
            pressures up to 4000 kg/cm². These metals were used
            because the bulk (K) and shear (G) moduli are known for
            high hydrostatic pressures. Eq.(2) is derived by
            differentiating the standard Eq.(1); Eq.(3) is an
            approximate formula relating K to p due to Bridgman.
            Table 2 is similar to Table 1 (same materials); the units
            are cm and kg. There are 7 references, none of which is
            Soviet.

Card 1/1

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR
            (Institute of Metal Physics, Ural Branch of the AS.USSR)

SUBMITTED: May 15, 1957

            1. Metals--Elasticity   2. Metals--Pressure

5.7/1.. -5..-4- 5/3C

AUTHORS: Vereshchagin, L. F., Gladkovskiy, V. A., Oleynik, G. I.

TITLE: An Instrument for Measuring the Hardness of Metals at Ultra-
High Pressures (Pribor dlya izmereniya tverdosti metallov
pri sverkhvysokikh davleniyakh)

PERIODICAL: Pribory i tekhnika eksperimenta, 1957, Nr 4, p 105 (USSR)

ABSTRACT: At the present time machines are available which may be
used to investigate plastic deformation of specimens under
the action of hydraulic compression. The instrument de-
cribed in this paper differs from those described so far
in that the mechanical properties of a metal under pressure
may be **determined** without damage to the **sample**. The hard-
ness of metals under pressure is determined from the im-
pression on its surface made by a standard indentor in the
form of a sphere, cone, etc. The instrument can be used in
static tests on metals under hydrostatic pressures of up to

Card 1/2

:07/123-, -4-15/;

An Instrument for Measur... ... . . E ... ... Ultra-High
Pressures

10 000 ;/cm². A cross section drawing through the instrument
is shown in Fig. 1 and it was developed and is being used
at the Urals Branch of the Academy of Sciences of the USSR.
There is 1 figure, no tables or references.

ASSOCIATION: Laboratoriya fiziki sverkhvysokikh davleniy AN SSSR
(Laboratory of **Ultra-High Pressure Physics** of the
Academy of Sciences, USSR)

SUBMITTED: October 15, 1957.

Card 2/2

SOV/126-6-4-29/34

AUTHOR: Gladkovskiy, V. A.

TITLE: On Work Hardening of Metals by Means of Hydrostatic
            Pressure (O naklepe metallov pod gidrostaticheskim
            davleniyem)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 4,
            pp 761-762 (USSR)

ABSTRACT: It can be assumed that work hardening, which determines
            the mechanical properties of the work hardened metal,
            depends basically on the magnitude of the deformation in
            the cold state. The type of the stress state at which
            the work hardening proceeds has less influence. The
            author of this paper has made an attempt to detect the
            influence of work hardening by stretching, under
            conditions of a high hydrostatic pressure, on the
            mechanical properties of certain metals. Such experiments
            should enable evaluating in the pure form the influence
            of the spherical stress tensor on the process of plastic
            deformation and work hardening of metals, which is of
            considerable importance not only from the point of view
            of improving further the accuracy of the theoretical
Card 1/5   conceptions expounded by Academician N. N. Davidenkov (Ref 1)

On Work Hardening of Metals by Means of Hydrostatic Pressure

but also in solving certain problems relating to the
shaping of metals by applying pressure. The experiments
were carried out on metals and alloys; the chemical
compositions and the heat treatment regimes are entered
in the table herewith:

| Material | Chemical Composition, % | | | | | | Heat Treat-ment |
	C	Mn	Si	Cu	Fe	Be	
Steel 50	0.45	0.60	0.05	–	–	–	Hardening, tempering at 700°C
Copper	–	–	–	Rest	0.05	–	Annealing at 600°C
Beryllium bronze	–	–	–	Rest	0.2	1.8	Quenching from 800°C in water

At first the specimens were work hardened by stretching
Card 2/5   under a high pressure to various magnitudes of

On Work Hardening of Metals by Means of Hydrostatic Pressure

SOV/128-6-4-3/3

deformation and, following that, the specimens were
tested for uniaxial tension at atmospheric pressure
Hardening under pressure was effected on a special test
rig for investigating the mechanical properties of metals
under high pressure described in earlier work (Ref 2).
Testing of the specimens under atmospheric pressure was
effected on an IM-4R type machine. The neck of the
specimen was measured by a watch-type gauge with an
accuracy of up to 0.02 mm. Fig.1 shows the elongation
diagrams for the specimens of Steel 50; on the abscissa
the full real deformation is plotted and on the ordinate
the real stresses (kg/mm^2). As can be seen from Fig.1
no appreciable change in the mechanical properties of
the material could be detected for this steel under a
pressure of 3 500 atm. Similar results were obtained
for copper, work hardened applying simultaneously a pressure
of up to 2500 atm. In the case of beryllium bronze,
the ability to develop concentrated plastic deformation
increases considerably with increasing work hardening
and so does the ultimate strength. After work hardening
of specimens by 44%, at a pressure of 3 200 atm, the

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SOV/126-6-4-29/34

On Work Hardening of Metals by Means of Hydrostatic Pressure

breaking strength increases by 15%, whilst the real
contraction increased by 21%. Under ordinary conditions,
work hardening by stretching of beryllium bronze is
possible only up to 80% (according to the data of the
author of this paper), after that a fracture takes place
in the specimen. However, in the case of a hydrostatic
pressure of 3000 atm, the work hardening in the neck of
the beryllium bronze specimens could be extended to 96%
and subsequent tensile tests have shown that the limit of
the real deformation of the specimens reached 120%.
According to the data of X-ray structural analysis (Ref 3),
work hardening of beryllium bronze under pressure is
accompanied by a slightly larger increase of the parameter
of the crystal lattice than for work hardening by tensile
stresses only. It can be assumed that the increased
mechanical properties of hardened beryllium bronze after
work hardening in presence of pressure is associated with
additional separating out of the hardening γ-phase.
However, in accordance with the principle of Le Chatelier,
an increase in the hydrostatic pressure can impede the

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SOV/126-6-4-29/34

On Work Hardening of Metals by Means of Hydrostatic Pressure

        development of transformations involving an increase in
        volume. Thus, an appreciable change of the mechanical
        properties of bronze after work hardening under pressure
        is apparently due to the occurrence during the hardening
        of anisotropies and residual stresses and not to the
        metastable nature of the alloy (Ref 4). No appreciable
        residual changes in the mechanical properties of the
        metals were observed as a result of the preliminary work
        hardening of Steel 50 and of the copper in the range of
        hydrostatic pressures between 2000 and 3000 atm.

        (Note: This is a complete translation)

        There are 1 figure, 1 table and 4 references, all of
        which are Soviet.
ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR
        (Institute of Metal Physics, Ural Branch of the Ac.Sc.USSR)
SUBMITTED: October 27, 1957

Card 5/5

AUTHORS: Gladkovskiy, V.A., Vereshchagin, L.F.   SOV/126-6-6-20/25
TITLE: Investigation of the Strength of Thick-walled Tubes
             (Issledovaniye prochnosti tolstostennykh trub)
PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6
             Nr 6, pp 1100 - 1104 (USSR)

ABSTRACT: In a number of cases, it is of great importance to evaluate
             the maximum internal pressure which will bring about tube
             failure. It can be assumed that the pressure at which
             tube failure will occur depends basically on the thickness
             of the tube and the strength characteristics of the tube
             material (Ref 3). However, this assumption requires
             experimental confirmation. For this purpose, Laboratoriya
             fiziki sverkhvysokikh davleniy AN SSSR (The Laboratory of
             Physics of Very High Pressures of the Ac.Sc.USSR) carried
             out in 1952-1955 strength studies of tubes subject to
             very high internal pressures up to 14 000 atm Similar
             strength studies of carbon-steel tubes (0.28% C) with
             pressures up to 7 100 atm were carried out not very long
             ago by Crossland and Bones (Ref 4) at Bristol University.
             A sketch of the special test rig permitting investigation

Card1/4

Investigation of the Strength of Thick-walled Tubes

of thick-walled tubes at internal pressures up to
14 000 atm is given in Figure 1. Preliminary filling
was effected with a hydraulic compressor which
increased the pressure to 5 000 - 4 000 atm. Further
increases in the pressure were obtained by displacing
a piston (6) inside a cylinder (5) by feeding fluid
into the lower cavity of the cylinder (7). For
obtaining in the high-pressure cylinders a pressure of
15 000 kg/cm^2, it was necessary to produce in the low-
pressure cylinder a pressure slightly exceeding
300 kg/cm^2. Tubes were tested which were made of
four differing grades of steel: 30KhGSA, 40Kh, U10
and EYaIT, the mechanical properties of which are

Card 2/4

Investigation of the Strength of Thick-walled Tubes

SOV/126-6-6-20/23

entered in a table on p 1102. The failure curves (D/d versus pressure) for tubes of the four steels are graphed in Figures 2 - 5. The obtained experimental curves are not in agreement with any of the semi-empirical formulae (Ref 4) proposed for calculating the pressure at which thick-walled tubes fail.
Lomakin (Ref 5) published in 1955 theoretical work on the calculation of tubes, taking into consideration high elastic-plastic deformations. In a separate paper,   the authors of this paper propose to evaluate the obtained results and to compare them with calculated data, based on various strength theories.

There are 5 figures, 1 table and 5 references, 3 of which are Soviet and 2 English.

Card3/4

SCV/126-6-6-20/25

Investigation of the Strength of Thick-walled Tubes

ASSOCIATION: Laboratoriya fiziki sverkhvysokikh davleniy
               AN SSSR
               (Laboratory of Physics of Very High Pressures
               of the Ac.Sc.USSR)

SUBMITTED: April 11, 1957

Card 4/4

SOV/126-7-1-16/28

AUTHORS: Yekhlakov, A.D.   and   Gladkovskiy, V.A.

TITLE: New Method for the Determination of the Dependence of
            Young's Modulus of Solid Bodies on Pressure (Novyy metod
            opredeleniya zavisimosti modulya Yunga tverdykh tel ot
            davleniya)

ABSTRACT: In this paper a   static method for the direct experimental
          study of the dependence of Young's modulus of substances on
          pressure is suggested.   This method is based on the deter-
          mination of the change in rigidity of a cantilever beam-
          specimen on application of hydrostatic pressure.   This
          determination is based on the restoration of the initial
          angle of bend of the cantilever beam-specimen, which is
          rigidly fixed in a high-pressure chamber, by means of
          turning the chamber through a certain angle $\Delta\alpha$,   the
          value of which determines the change of Young's modulus
          with pressure.   The method suggested also allows the
Card 1/4 simultaneous determination of the compressibility of the

SOV/126-7-1-16/28

New Method for the Determination of the Dependence of Young's
Modulus of Solid Bodies on Pressure

liquid which transmits the pressure to the specimen.   In
order to measure the change of Young's modulus with pressure
a high-pressure apparatus was built.   The main part of
this apparatus is a special steel mandrel, which is shown
in Fig.2.   The specimen, 1, in the form of a length of
wire, is inserted in pincer grips, 2.   A centralizing
device, 3, enables the circuit to be closed, 5, at a
pre-determined time for a selected angle of inclination of
the apparatus.   A load, 4, of 0.4-0.6 g in weight, was
chosen which was usually made of the same material as the
specimen (except for experiments with aluminium).   The
apparatus, when assembled, was placed in a high-pressure
chamber, and was firmly affixed to it by means of two cover
plates, 6.   A high pressure was established in the chamber
by a high-pressure compressor of the L.F. Vereshchagin
type.   The chamber is provided with an electric conductor,
which passes through a conical ebonite stopper.   The other
end of the tappings, 7, makes contact with the chamber.

Card 2/4 The working of the apparatus consists in the following:

New Method for the Determination of the Dependence of Young's
Modulus of Solid Bodies on Pressure

at the beginning of the experiment the apparatus with the
specimen at atmospheric pressure is, by turning the high-
pressure chamber, put in a position at which short-circuiting
of contacts, 5, occurs.   If Young's modulus of the
investigated substance increases with rise in pressure,
and hence the angle of bend of the beam-specimen decreases,
then it is sufficient to set up a relatively small pressure
in the chamber to cause short-circuiting of the contacts.
For repeated short-circuiting of the contacts (at existing
pressure) a supplementary turning of the chamber through
a certain angle $\Delta \alpha_1$ is required, etc.   Hence, the
relationship between the angle of turn of the chamber and
the hydrostatic pressure both on raising and on lowering of
the pressure, can be found.   The experiments were carried
out with aluminium, copper (containing 0.05-0.15 per cent
impurities) and steel St50.   The specimens were made from
0.7-1.0 mm diameter wire.   A mixture of kerosene and
transformer oil, the compressibility of which was determined
in this apparatus (see Fig.3) was chosen as the medium for
Card 3/4   transmitting the high pressure to the specimen.   In the

SOV/126-7-1-16/26

New Method for the Determination of the Dependence of Young's
Modulus of Solid Bodies on Pressure

determination of the compressibility of the mixture loads
used were of materials which markedly differed from one
another in their specific gravity.   The experiments were
carried out at room temperature (20°C).   The results of
direct measurements of the change in Young's modulus with
pressure for aluminium, copper and steel St50   are shown
in Fig.4.   There are 4 figures and 7 references, of
which 2 are Soviet and 5 English.

ASSOCIATION: Institut fiziki metallov AN SSSR   (Institute of Metal
        Physics, Ac. Sc. USSR)

SUBMITTED: November 25, 1957

Card 4/4

S/137/61/000/001/042/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 1, p. 50,
1I433

AUTHOR: Gladkovskiy, V.A.

TITLE: A New Method of Measuring the Compressibility of Metals and Alloys

PERIODICAL: "Sb. nauchno-tekhn. tr. N.-i. in-t metallurgii Chelyab. sovnarkhoza",
               1960, No. 1, pp. 145 - 154

TEXT: A method was developed for determining stresses in machine parts and
metal structures using wire resistance strain-gauges. The method was also applied
to measure magnetostriction of ferromagnetic materials. The author presents a
bloc-circuit diagram of the measuring assembly of the machine and describes the
method. The method of determining compressibility is based on the comparison of
the relative changes in the linear dimensions of the investigated specimen and the
standard when hydrostatic pressure is applied. Specimens made of high purity com-
merical Fe and Al are used as standards. The tests were made at $15^{\circ}C$. This tem-

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S/137/61/000/001/042/043
A006/A001

A New Method of Measuring the Compressibility of Metals and Alloys

perature was maintained with up to 0.5° accuracy. Fe, Al, Cu, Ag, Au, Pb, Ni and
W specimens were manufactured in the form of 2 mm thick plates that were carefully
ground and polished, then annealed at different temperatures in a vacuum for 2
hours and slowly cooled with the furnace. The results of experiments are presented.
There are 15 references.

V. F.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

18 8200 also 2108

AUTHORS: Gladkovskiy, V. A.

TITLE: On the periodic dependence of the compressibility

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, Pb., 25-26, abstract
72n20. (Sb. nauchno-tekhn. tr. N-i, inst. metallurgii Chelyab.
sovnarkhoza', 1960, no. 2, 63-67

TEXT: On the basis of experimental data of linear compressibility of
elements, the value of the virtual compressibility of all elements at a pressure
of approximately 400,000 kg/m² is calculated by the method of finite differences
curves for the logarithm of the coefficient of virtual compressibility of elements
versus their atomic number are plotted. Qualitatively speaking, the pattern of
periodic compressibility of elements as a function of their atomic number is ob-
tained. As the pressure increases the periodicity function changes its form, and
at superhigh pressures (of the order of several million atmospheres) the curve
of variation of the function of periodic compressibility approaches the
axis of abscissas asymptotically. It is considered that as the pressure increases
the bond forces along the crystallographic axes become equal, however already at

Card 1/2

On the periodic dependence ...

26047
S, 137/61 000/001/063/072
A 060/A 063

pressures of about 1.5 million atmospheres the close drop of the binding forces
is observed. The conjecture is expressed that only at pressures of tens and
hundreds of millions of atmospheres the individual inertial properties of matter
and the regularity of layer-wise distribution of electrons about the nucleus
begin gradually to vanish, and a statistical state of matter arises. There are
6 references.

Y. Bachurin

[Abstracter's note. Complete translation]

Card 2/2

BURSIN, A.V.; GLADKOVSKIY, V.A.; VYSOKOVSKIY, S.N.; VASIN, I.I.

Disk dynamometer for measuring forces in rolling mills.
[Sbor. trud.] Nauch.-issl.inst.met. no.4:115-118 '61.
                                        (MIRA 15:11)
          (Rolling mills—Testing)
            (Dynamometer)

GLADKOVSKIY, V.A.; MOROZOV, A.N.; STROGANOV, A.I.; VACHUGOV, G.A.;
        Prinimali uchastiye: BELOV, B.V., inzh.; POPOV, N.P., inzh.;
        BAYAZITOV, M.I., inzh.

        Effect of work hardening on the properties of structural
        steel. [Sbor. trud.] Nauch.-issl.inst.met. no.4:144-150
        '61.   (MIRA 15:11)

        1. Nauchno-issledovatel'skiy institut metallurgii (for
        Gladkovskiy, Morozov, Stroganov). 2. Zlatoustovskiy
        metallurgicheskiy zavod (for Vachugov).
                        (Steel, Structural—Hardening)

KASHIRIN, N.A.; GLADKOVSKIY, V.A.; FRIKKE, S.A.; Prinimali uchastiye:
POPOV, N.P., inzh.; BARYSHEV, S.P., inzh.; SUVOROVA, V.I.,
inzh.; SERGEYEV, I.I., inzh.

Effect of expanding on the distribution of residual stresses
in large-diameter pipes. [Sbor. trud.] Nauch.-issl.inst.met.
no.4:158-163 '61.   (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut metallurgii (for Kashirin,
Gladkovskiy). 2. Ural'skiy nauchno-issledovatel'skiy trubnyy
institut (for Frikke).
                 (Expanded metal)
             (Strains and stresses)

GLADKOVSKIY, V.A.

Stress distribution in surface layers of expanded 19G steel
pipes. Stal' 21 no.6:542 Je '61.   (MIRA 14:5)
                        (Expanded metal)

FRIKKE, S.A., inzh.; GLADKOVSKIY, V.A , kand. tekhn, nauk

Strains and the plasticity of metal in the manufacture of electrically
welded expanded pipe for gas pipelines. Stal: 22 no.1:53-56 Ja '62.
(MIRA 14:12)

1. Ural'skiy nauchno-issledovatel'skiy trubnyy institut i
Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii.
(Pipe mills)
(Strains and stresses)

GLADKOVSKIY, V.A.; KARELIN, N.A.

Effect of boron on yield points in alpha-iron. Fiz. met. i
metalloved. 13 no.5:772-774 My '62.   (MIRA 15:6)

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallurgii
i Chelyabinskiy pedagogicheskiy institut.
                    (Iron-boron alloys)
                 (Deformations (Mechanics))

SAMUL', V.I., dots., kand. tekhn. nauk; GLADKOVSKIY, V.A., dots.,
        kand. tekhn. nauk, otv. red.; TIMOFEYEVA, Z.N., red.;
        KOLOVA, T.D., tekhn. red.

        [Principles of the theory of elasticity] Osnovy teorii
        uprugosti. Perm. Pt.1. [Textbook for students majoring
        in "Industrial and civil engineering"] Uchebno-metodiche-
        skoe posobie dlia studentov spetsial'nosti "Promyshlennoe
        i grazhdanskoe stroitel'stvo." 1963. 73 p. (MIRA 16:8)

        1. Perm. Politekhnicheskiy institut. Kafedra soprotivleniya
        materialov. 2. Zaveduyushchiy kafedroy soprotivleniya ma-
        terialov Permskogo politekhnicheskogo instituta (for
        Gladkovskiy).
                    (Elasticity)

GOL'DSHTEYN, Ya.Ye.; BELIKOV, A.M., kand. tekhn. nauk, retsenzent;
GLADKOVSKIY, M.A., kand. tekhn. nauk, retsenzent;
KOROTUSHENKO, G.V., kand. tekhn.nauk, retsenzent; BONDIN,
Ye.A., laureat Gosudarstvennoy premii inzh., retsenzent;
KALETINA, A.V., ved. red.; DUGINA, N.A., tekhn.red.

[Low-alloy steel in machinery manufacture] Nizkolegirovannye
stali v mashinostroenii. Moskva, Mashgiz, 1963. 239 p.
(MIRA 16:8)

(Machinery--Design and construction) (Steel alloys)

FINKEL'SHTEYN, Ya.S.; GLADKOVSKIY, V.A.; BATIST, G.S.

Heat-treatment hardening of pipe manufactured by the furnace welding method.
Metalloved. i term. obr. met. no.3:33-35 Mr '63.   (MIRA 16:3)
    (Pipe, Steel—Welding)   (Steel—Hardening)

AUTHORS: Gladkovskiy, V.A., Karelin, N.A. (Perm')

TITLE: Influence of boron on the yield-point elongation of
             alpha-iron

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
             tekhnicheskikh nauk. Metallurgiya i gornoye delo.
             no.1, 1963, 144-146

TEXT: . It has previously been shown that the appearance of yield-
point elongation in alpha-iron is due to the presence of small
quantities of carbon or nitrogen.   It was therefore interesting
to study the early stages of the deformation of alpha-iron
containing boron additions, since the atomic radius of boron is
close to those of carbon and nitrogen.   The authors have done so
with 99.9% pure Armco iron, with additions of 0.01 and 0.10% B.
The mechanical tests were supplemented by thermoelectric potential
measurements on a deformed/annealed thermocouple, which was found
to be sensitive to the appearance of the elongation.   Without
boron there is no flat portion but with 0.01% B the "flat" becomes
apparent and with 0.1% it is very pronounced.   The effect is
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Influence of boron ...   S/279/63/000/001/014/023
                                               E111/E452

connected specifically with the presence of boron in the iron and
to its effect on grain size and shape.   In contrast to nitrogen
and carbon, boron reduces the susceptibility of alpha-iron to
deformation ageing. The thermoelectric potential vs. strain
curves are initially linear and identical for all three
compositions but a break occurs at a critical value which depends
on the extent of the "flat".   The existence of a break on the
curve for boron-free iron is due to the sensitivity of the emf
method being greater than that of the mechanical method.   The
break is associated with the distinct change in dislocation density
at various stages of deformation.   There are 2 figures.

SUBMITTED: January 3, 1962

Card 2/2

FEDOROV, Ie.K.; GLADKOVSKIY, V.A.; KOLBANOV, F.F.

Method of measuring the specific pressure in pressing loose materials in roller presses. Gor. zhur. no.3.64-65 Mr '63.

(MIRA 16.4)

1. Nauchno-issledovatel'skiy institut metallurgii, Chelyabinsk.

FEDOROV, Ye.K.; KOLESANOV, F.F.; GLADKOVSKIY, V.A.

     Measuring specific pressure in roller presses during nickel ore
     briquetting. TSvet. met. 36 no.7:82-84 Jl '63.   (MIRA 16:8)
             (Pressure--Measurement) (Briquets)

VASSERMAN, N.N., aspirant; GLADKOVSKIY, V.A., kand. tekhn. nauk, dotsent

Regularities in the hardening and damage accumulation in the
process of cyclic loading of low-carbon steel. Izv. vys. ucheb.
zav.; mashinostr. no.2:68-77 '65.   (MIRA 18:5)

1. Permskiy politekhnicheskiy institut.

MIKELADZE, G.Sh.; NADIRADZE, Ye.M.; PKHAKADZE, Sh.S.; GOGORISHVILI, B.P.;
    DGEBAUDZE, G.A.; SOLOSHENKO, P.S.; SEMENOV, V.Ye.; BARASHKIN, I.I.;
    SHIRYAYEV, Yu.S.; POSPELOV, Yu.P.; KATSEVICH, L.S.; ROZENBERG, V.L.;
    Prinimali uchastiye: LORDKIPANIDZE, I.S.; TSKHVEDIANI, R.N.;
    DZODZUASHVILI, A.G.; DUNIAVA, A.G.; PEKARSKIY, L.F.; GRITSENYUK, Yu.V.;
    ZHELTOV, D.D.; LUZANOV, I.I.; GLADKOVSKIY, V.P.; PODMOGIL'NYY, V.P.;
    VOROPAYEV, I.P.; BRIKOVA, O.V.; VRUBLEVSKIY, Yu.P.; KLYUYEV, V.I.;
    BAYCHER, M.Yu.; LOGINOV, G.A.; SHILIN, V.K.; POPOV, A.I.; ZASLONKO, S.I.

Industrial experiments in the smelting of 45 o/o ferrosilicon in
a heavy-duty closed electric furnace. Stal' 25 no.5:426-429 My '65.
                                              (MIRA 18:6)

1. Gruzinskiy institut metallurgii (for Lordkipanidze, TSkhvediani,
Dzodzuashvili, Guniava). 2. Nauchno-issledovatel'skiy i proyektnyy
institut metallurgicheskoy promyshlennosti (for Brikova, Vrublevskiy,
Klyuyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-
termicheskogo oborudovaniya (for Baycher, Loginov, Shilin, Popov,
Zaslonko).

B-5

USSR/ Physical Chemistry - Crystals

Abs Jour : Referat Zhur Khimiya, No 4, 1957, 11039

Author   : Gladkovskiy V., Meyklyar P.V.
Title   : Dark Conductivity of Silver Bromide Crystals

Orig Pub : Zh eksperim i teor fiziki, 1956, 30, No 5, 833-839 (English summary)

Abstract : Fulfillment of Faraday's law was verified and it was shown that with small
             differences in potential ($< 4v$) conductivity of AgBr crystals having a
             thickness of several tenths of a millimeter is of electronic nature, while
             in higher fields it is ionic. Occurence of ionic conductivity is accompa-
             nied by growth of Ag-filaments (dendrites) over defects and surface of crys-
             tal (at $100-200^\circ$). Growth of filaments starts at cathode and takes place by
             depletion of Ag^+ions in areas adjoining the Ag-filaments. On change in di-
             rection of field length of filaments at anode decreases while at the cathode
             (graphite of Pt) new dendrites appear. At 100° in a field of 50 v/cm rate
             of growth of Ag-filaments is of $10^{-3} - 10^{-2}$ mm/sec. Difference in potential
             at which conductivity becomes of ionic nature is higher for samples with fe-
             wer defects The authors reach the conclusion that electric field lowers
             energy of activation of movements of ions over defect areas of crystal.

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